

THE APPLICATION OF TRAINING EXERCISES TO IMPROVE THE EFFICIENCY OF USING OVERHEAD PASSING TECHNIQUE IN VOLLEYBALL FOR COURSE 14'S MALE STUDENTS OF PHYSICAL EDUCATION DEPARTMENT - HUE UNIVERSITY

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Abstract:

Using regular scientific research methods, we assessed the actual situation of selection and application of exercises to enhance volleyball techniques in general and Overhead Passing Technique in particular for students of the Physical Education department (PE) - Hue University. From there, there would be a contribution to improving the quality of Physical Education and Sports at the Physical Education department - Hue University.

Keywords: Exercise, Professional physical strength, Volleyball, Physical Education department – Hue University.

INTRODUCTION

Achieving a high technical level in playing volleyball – one of the most favorite sports – is not easy for everyone. It is necessary to identify and select measures to improve volleyball technical efficiency. Therefore, in the teaching process, teachers have to find new approaches, create and build suitable exercises. Through the practice of teaching and coaching, the training program for students of Physical Education department - Hue University, we realized that the technical level of students is still weak, especially the overhead passing - an important technique in playing volleyball. Thus, improving the efficiency of passing techniques in general and Overhead Passing technique in particular for students of the Physical Education department - Hue University has a meaningful, practical and scientific purpose.

RESEARCH METHODS

The following are the methods used in the research: Analyzing and synthesizing documents, interviewing expert, pedagogical observation, pedagogical examination, pedagogical experiment, statistical mathematics.

RESULTS AND DISCUSSION

1. Evaluating the actual situation of teaching Overhead Passing technique of Physical Education department – Hue University

1.1. The actual situation of teaching and coaching volleyball

Students majoring in Pedagogical Physical Education are required to learn volleyball from Semester I to Semester IV. Thus, the students who are studying volleyball are those who have shown their talent in volleyball. However, they have just got used to basic technical term but no experience in competition and have not been trained physical strength systematically. As a result, the inadequacy of maintaining physical strength and the weakness in the application of basic techniques at the end of the match of many students lead to a great influence on the ability to attack and defend in the competition.

With the purpose of investigating the actual situation of teaching volleyball for students of the Physical Education department - Hue University, our research conducted a research on the curriculum and teaching plan of volleyball for students of the Physical Education

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Table 1. The ratio of volleyball content teaching time at Physical Education department - Hue University

No	Teaching content	Teaching time for each content (hour)			
		First year		Second year	
		m_i	%	m_i	%
1.	Attack techniques	16	21.05	18	22.50
2.	Defend techniques	16	21.05	16	22.50
3.	Tactical strategies	16	21.05	15	18.75
4.	General physical strength	16	21.05	15	18.75
5.	Professional physical strength	12	15.80	14	17.50
	Total	76	100	80	100

department - Hue University. The results are presented in Table 1.

Table 1 shows the following points: The total number of hours of teaching volleyball for students of the Physical Education department - Hue University is 90 periods distributed into 2 modules (45 periods/module, including 37 practice and 08 theory periods, regular tests and final exam) in which the practical content contains 74/90 periods (in 2 modules) accounting for 82.22%. Thereby, the proportion of time spent on teaching techniques, general physical strength and professional physical strength are relatively equal.

1.2. The selection of tests to evaluate the efficiency of Overhead Passing technique for the male students of Course 14 of Physical Education department - Hue University

The selecting process is based on a comprehensive analysis of specialized documents; interviews with 20 coaches, teachers and experts who have expertise in volleyball; and a reliability determination process (each of the interviewees selected only one test). The following 4 tests are the results that are considered to be specific to assess the efficiency of the overhead passing technique for male students of Course 14 of Physical Education department - Hue University: Pass onto targets; Move and pass; Run up on steep slope 30 x 2 times (2 minutes rest and run at least 80% of one’s strength); Exercising durability.

2. Selecting and applying exercises to improve the overhead passing technique in case of male students in the course 14 of

Physical Education department - Hue University

2.1. Identify some application exercises to improve the efficiency of the overhead passing technique

The opinions of the teachers and coaches to assess and select exercises to improve the efficiency of overhead passing skill are presented in Table 2.

From the interview results, we have selected 10 exercises with the rate of 80% or higher. The exercises in bold are selected to apply for experimental subjects. In teaching, it is necessary to select exercises and assign time to suit teaching purposes and plans, and build a reasonable process in the experimental process.

2.2. Experiment

2.2.1. Examine subjects before experiment

As we mentioned above, the research subjects of the project is 18 male students of Course 14 of Physical Education department - Hue University. These students are divided into 2 groups randomly: Experimental group (E) and Control group (C). To ensure objectivity, we tested two groups by using tests selected through many assessments to evaluate the efficiency of the overhead passing technique for male students of course 14 of Physical Education department - Hue University.

Test 1. Pass onto targets (Points achieved in 45 seconds).

Test 2. Move and pass (Effective passes in 45 seconds).

Test 3. Exercising durability (Time calculated in each practice)

Table 2. The results of interview about exercises of evaluating overhead passing technique for students at Physical Education department – Hue University (n=20)

No.	Interview content	Result	
		Number of opinions selected	Rate %
1	Pass onto targets	18	90.00
2	Move and pass	17	85.00
3	Pass at the distance of 6-8m	16	80.00
4	Pass at the distance of 3-4m	17	85.00
5	2 people stand opposite each other and pass	10	50.00
6	Defend, set, block and pass	16	80.00
7	Use 2 balls swap positions and pass	17	85.00
8	Competition exercise	18	90.00
9	100m interval running	11	55.00
10	Run up on steep slope 30 x 2 times (2 minutes rest and run at least 80% of one's strength)	16	80.00
11	30m, 60m speed running	12	60.00
12	Zigzag running	18	90.00
13	Fingertip Push-Up	17	85.00
14	Push-up on double parallel bars	10	50.00
15	Bend and stretch wrists with 2kg double weights	9	45.00

Test 4. Run up on steep slope 30 x 2 times (2 minutes rest and run at least 80% of one's strength).

Test results before experiment are presented in Table 3.

Table 3 shows that all 5 tests have a result of $t_{\text{calculated}} < t_{\text{table}} = 2,120$, which allows us to conclude: before the experiment, the difference of the two groups is not significant at the probability threshold $P = 0.05$. In other words,

before the experiment, the 2 groups had similar qualifications.

2.2.2. Conduct experiment:

The selected exercises were applied to 2nd-year male students of Physical Education department – Hue University (experimental group) with a 3-month experimental duration of 2 lesson plans per week. The control group still practiced with the old curriculum.

2.3. Testing subjects after experiment

Table 3. Test results of two groups before the experiment

Test Group Index	Test 1		Test 2		Test 3		Test 4	
	E (n = 9)	C (n = 9)						
\bar{x}	134	132	11.2	10.3	29.8	29.3	9.3	9.4
δ^2	2.47		1.22		0.485		0.324	
$t_{\text{calculated}}$	0.39		0.44		0.55		0.23	
t_{table}	2.120		2.120		2.120		2.120	
P	0.05		0.05		0.05		0.05	

Table 4. Test results after experiment

Index \ Test Group	Test 1		Test 2		Test 3		Test 4	
	E (n = 9)	C (n = 9)						
\bar{x}	271	140	15.2	12.3	25.7	28.6	7.3	8.9
δ^2	2.29		1.02		0.048		0.124	
$t_{\text{calculated}}$	11.23		6.44		8.637		5.230	
t_{table}	2.120		2.120		2.120		2.120	
P	< 0.05		<0.05		<0.05		<0.05	

After a 3-month experiment duration, we conducted a test of the effectiveness of overhead passing technique through the content identified in the two groups. Results are presented in Table 4.

Table 4 indicated that all 5 tests have the result of $t_{\text{calculated}} > t_{\text{table}} = 2,120$. Thus, after 3 months of doing experiment, the test result is $|t_{\text{calculated}}| > t_{\text{table}}$. The difference between the two groups is significant at the probability threshold of $P \leq 0,05$. In other words, the exercises we selected during teaching process of overhead passing technique for male students of course 14 of Physical Education department - Hue University were effective.

CONCLUSION

The obtained results above lead to the following conclusions:

1. In the research topic, we identify two groups of exercises that are typical for teaching overhead passing technique that are applied in the experimental process with high practicality. There is still a lack of options in the selection of professional exercises used in teaching overhead passing technique for male students of course 14 of Physical education department – Hue University, leading to the ineffectiveness in performing this technique.

2. After conducting the research, we have selected 4 following tests that have the most typical and specialized characteristics in evaluating the efficiency of overhead passing technique: Pass onto targets; Move and pass; Run up on steep slope 30 x 2 times (2 minutes rest and run at least 80% of one’s strength); Exercising durability. After 3 months of experimenting, the test result is $|t_{\text{calculated}}| > t_{\text{table}}$.

The difference between the two groups is significant at the probability threshold of $P \leq 0,05$. In other words, the application of these selected exercises during teaching process of overhead passing technique for male students of course 14 of Physical Education department - Hue University were effective.

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